

Applied to combining circuit with use of V.O.D.
When said coupling does not include delay
Coupled to
said feedback signal is directly applied to combining circuit
When said feedback signal is delayed, it is applied to combining circuit
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a combining circuit responsive to said feedback signal without further substantial variable delay and said cancellation signal to provide said mix minus signal.

Claim 2 (amended) A system for providing a mix minus signal from a delayed feedback signal and a relatively undelayed talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of at least one of said delay or gain responsive to said mix minus signal or said feedback signal or both;

a combining circuit responsive to said feedback signal without further substantial variable delay and said cancellation signal to provide said mix minus signal.

Claim 3 (amended) A system for providing a mix minus signal from a delayed feedback signal and a relatively undelayed talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay and gain automatically responsive to at least one of said mix minus signal and said feedback signal and;

a combining circuit responsive to said feedback signal without further substantial variable delay and said cancellation signal to provide said mix minus signal.

Claim 4 A system as claimed in claim 1, 2 or 3 wherein said amount of said delay is responsive to said feedback signal and the amount of said gain is responsive to said mix minus signal.

said feedback signal & said cancellation signal being applied to a combining circuit to provide said mix minus signal with said feedback signal being applied with

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X2
Claim 5 (amended) A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay or gain responsive to operator adjustment;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

[A system as claimed in claim 1, 2 or 3] wherein said amount of said delay is responsive to said mix minus signal and the amount of said gain is responsive to said feedback signal.

Claim 6 A system as claimed in claim 1, 2 or 3 wherein said amount of said delay and said amount of said gain is responsive to said feedback signal.

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X3
Claim 7 (amended) A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay or gain responsive to operator adjustment;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

[A system as claimed in claim 1, 2 or 3] wherein said amount of said delay and said amount of said gain is responsive to said mix minus signal.

Claim 8 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said mix minus signal and said talent signal wherein said talent signal is in delayed form.

Claim 9 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal is in delayed form.

Claim 10 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said mix minus signal and said talent signal wherein said talent signal is in undelayed form.

Claim 11 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal is in undelayed form.

Claim 12 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said mix minus signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 13 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 14 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said mix minus signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 15 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 16 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said feedback signal and said cancellation signal.

Claim 17 A system as claimed in claim 1, 2 or 3 wherein at least one of said amount of said delay and said amount of said gain is responsive to a correlation of said mix minus signal and said cancellation signal.

Claim 18 A system as claimed in claim 1, 2 or 3 wherein said delay is automatically adjustable in response to changes in relative delay of said talent signal and the talent signal component of said feedback signal.

Claim 19 (amended) A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:
a cancellation circuit responsive to said talent signal to delay said talent signal in a vari-

able delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay or gain responsive to operator adjustment;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

[A system as claimed in claim 1, 2 or 3] wherein said delay is automatically adjusted in response to comparison of said feedback signal and said talent signal in undelayed form, and said gain is automatically adjusted in response to said mix minus signal and said talent signal in delayed form.

Claim 20 (amended) A method for providing a mix minus signal from a talent signal and a feedback signal having a variable amount of delay including the steps of:

- a) delaying said talent signal by a varying delay amount in continuing response to said variable amount of delay;
- b) providing a cancellation signal of a known level in response to said delayed talent signal;
- c) changing said varying delay amount of said delay in step a) from time to time;
- d) combining said feedback signal and said cancellation signal to provide said mix minus signal.

Claim 21 (amended) A method of providing a mix minus signal from a feedback signal and a talent signal which have a variable relative timing, including the steps of:

- a) delaying said talent signal by a varying delay amount in [responsive] continuing response to said varying relative timing;
- b) adjusting the level of said talent signal in delayed or undelayed form and providing a

cancellation signal in response to the delayed form thereof;

c) in said delaying step a) or said adjusting step b) or both, changing the amount of at least one of said varying delay amount or said level in responsive to said mix minus signal or said feedback signal or both;

d) providing said mix minus signal in response to said feedback signal and said cancellation signal.

Claim 22 (amended) A method for providing a mix minus signal from a feedback signal and a talent signal said signals having a relative delay which may vary, including the steps of:

a) delaying said talent signal by an varying delay amount continuously responsive to said relative delay which may vary;

b) adjusting the level of said talent signal in delayed or undelayed form in a variable gain circuit and providing a cancellation signal in response to the delayed version thereof;

c) wherein in step a) said varying delay amount and in step b) said level are automatically responsive to at least one of said mix minus signal and said feedback signal and;

d) providing said mix minus signal in response to said feedback signal and said cancellation signal.

Claim 23 A method as claimed in claim 20, 21 or 22 wherein said varying delay amount of step a) is responsive to said feedback signal and said level of step b) is responsive to said mix minus signal.

Claim 24 (amended) A method for providing a mix minus signal from a talent signal and

a feedback signal having a variable amount of delay including the steps of:

a) delaying said talent signal by a varying delay amount in response to said variable amount of delay;

b) providing a cancellation signal of a known level in response to said delayed talent signal;

c) changing said varying delay amount of said delay in step a) from time to time;

d) combining said feedback signal and said cancellation signal to provide said mix minus signal;

[A method as claimed in claim 20, 21 or 22] wherein said varying delay amount of step

a) is responsive to said mix minus signal and said level of step b) is responsive to said feedback signal.

Claim 25 A method as claimed in claim 20, 21 or 22 wherein said varying delay amount of step a) and said level of step b) is responsive to said feedback signal.

Claim 26 (amended) A method for providing a mix minus signal from a talent signal and a feedback signal having a variable amount of delay including the steps of:

a) delaying said talent signal by a varying delay amount in response to said variable amount of delay;

b) providing a cancellation signal of a known level in response to said delayed talent signal;

c) changing said varying delay amount of said delay in step a) from time to time;

d) combining said feedback signal and said cancellation signal to provide said mix minus signal;

[A method as claimed in claim 20, 21 or 22] wherein said varying delay amount of step

a) and said level of step b) is responsive to said mix minus signal.

Claim 27 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said talent signal in delayed form.

Claim 28 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal is in delayed form.

Claim 29 (amended) A method for providing a mix minus signal from a talent signal and a feedback signal having a variable amount of delay including the steps of:

- a) delaying said talent signal by a varying delay amount in response to said variable amount of delay;
- b) providing a cancellation signal of a known level in response to said delayed talent signal;
- c) changing said varying delay amount of said delay in step a) from time to time;
- d) combining said feedback signal and said cancellation signal to provide said mix minus signal;

[A method as claimed in claim 20, 21 or 22] wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal and said talent signal in undelayed form.

Claim 30 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said feedback signal and said talent signal wherein said talent signal is in undelayed form.

Claim 31 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust step.

Claim 32 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 33 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to a correlation of said mix minus signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 34 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to a correlation of said feedback signal and said talent signal wherein said talent signal has been gain adjusted in said gain adjust circuit.

Claim 35 A method as claimed in claim 20, 21 or 22 wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to a correlation of said feedback signal and said cancellation signal.

Claim 36 A method as claimed in claim 20, 21 or 22 wherein at least one of said vary-

ing delay amount of step a) and said level of step b) is responsive to a correlation of said mix minus signal and said cancellation signal.

Claim 37 A method as claimed in claim 20, 21 or 22 wherein said varying delay amount of step a) is automatically adjustable in response to changes in relative delay of said talent signal and the talent signal component of said feedback signal.

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Claim 38 (amended) A method for providing a mix minus signal from a talent signal and a feedback signal having a variable amount of delay including the steps of:

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- a) delaying said talent signal by a varying delay amount in response to said variable amount of delay;
 - b) providing a cancellation signal of a known level in response to said delayed talent signal;
 - c) changing said varying delay amount of said delay in step a) from time to time;
 - d) combining said feedback signal and said cancellation signal to provide said mix minus signal;

[A method as claimed in claim 20, 21 or 22] wherein said varying delay amount of step a) is automatically adjusted in response to comparison of said feedback signal and said talent signal in undelayed form, and said level of step b) is automatically adjusted in response to said mix minus signal and said talent signal in delayed form.

Claim 39 A method as claimed in claim 20, 21 or 22 wherein said delaying of step a) include pitch correction in order that the pitch of said talent signal remains constant as said delay is changed.

Add new claims 40-53:

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Claim 40 A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of at least one of said delay or gain responsive to said mix minus signal or said feedback signal or both;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

wherein said amount of said delay is responsive to said mix minus signal and the amount of said gain is responsive to said feedback signal.

Claim 41 A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay and gain automatically responsive to at least one of said mix minus signal and said feedback signal and;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

wherein said amount of said delay is responsive to said mix minus signal and the amount of said gain is responsive to said feedback signal.

Claim 42 A system for providing a mix minus signal from a feedback signal and a talent

signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of at least one of said delay or gain responsive to said mix minus signal or said feedback signal or both;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

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CA [wherein said amount of said delay and said amount of said gain is responsive to said mix minus signal.

Claim 43 A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay and gain automatically responsive to at least one of said mix minus signal and said feedback signal and;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

112 [wherein said amount of said delay and said amount of said gain is responsive to said mix minus signal.

Claim 44 A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

a cancellation circuit responsive to said talent signal to delay said talent signal in a vari-

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able delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of at least one of said delay or gain responsive to said mix minus signal or said feedback signal or both;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

wherein said delay is automatically adjusted in response to comparison of said feedback signal and said talent signal in undelayed form, and said gain is automatically adjusted in response to said mix minus signal and said talent signal in delayed form.

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Claim 45 A system for providing a mix minus signal from a feedback signal and a talent signal including in combination:

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a cancellation circuit responsive to said talent signal to delay said talent signal in a variable delay and to gain adjust said talent signal in delayed or undelayed form in a variable gain circuit thereby providing a cancellation signal, with the amount of said delay and gain automatically responsive to at least one of said mix minus signal and said feedback signal and;

a combining circuit responsive to said feedback signal and said cancellation signal to provide said mix minus signal;

wherein said delay is automatically adjusted in response to comparison of said feedback signal and said talent signal in undelayed form, and said gain is automatically adjusted in response to said mix minus signal and said talent signal in delayed form.

Claim 46 A method of providing a mix minus signal from a feedback signal and a talent signal which have a variable relative timing, including the steps of:

a) delaying said talent signal by a varying delay amount in responsive to said varying rela-

tive timing;

- b) adjusting the level of said talent signal in delayed or undelayed form and providing a cancellation signal in response to the delayed form thereof;
- c) in said delaying step a) or said adjusting step b) or both, changing the amount of at least one of said varying delay amount or said level in responsive to said mix minus signal or said feedback signal or both;
- d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

112 { wherein said varying delay amount of step a) is responsive to said mix minus signal and said level of step b) is responsive to said feedback signal.

Claim 47 A method for providing a mix minus signal from a feedback signal and a talent signal said signals having a relative delay which may vary, including the steps of:

- a) delaying said talent signal by an varying delay amount responsive to said relative delay which may vary;
- b) adjusting the level of said talent signal in delayed or undelayed form in a variable gain circuit and providing a cancellation signal in response to the delayed version thereof;
- c) wherein in step a) said varying delay amount and in step b) said level are automatically responsive to at least one of said mix minus signal and said feedback signal and;
- d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

112 { wherein said varying delay amount of step a) is responsive to said mix minus signal and said level of step b) is responsive to said feedback signal.

Claim 48 A method of providing a mix minus signal from a feedback signal and a talent signal which have a variable relative timing, including the steps of:

- a) delaying said talent signal by a varying delay amount in responsive to said varying relative timing;
- b) adjusting the level of said talent signal in delayed or undelayed form and providing a cancellation signal in response to the delayed form thereof;
- c) in said delaying step a) or said adjusting step b) or both, changing the amount of at least one of said varying delay amount or said level in responsive to said mix minus signal or said feedback signal or both;
- d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

CA 17 wherein said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal.

Claim 49 A method for providing a mix minus signal from a feedback signal and a talent signal said signals having a relative delay which may vary, including the steps of:

- a) delaying said talent signal by an varying delay amount responsive to said relative delay which may vary;
- b) adjusting the level of said talent signal in delayed or undelayed form in a variable gain circuit and providing a cancellation signal in response to the delayed version thereof;
- c) wherein in step a) said varying delay amount and in step b) said level are automatically responsive to at least one of said mix minus signal and said feedback signal and;
- d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

112 wherein said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal.

Claim 50 A method of providing a mix minus signal from a feedback signal and a talent signal which have a variable relative timing, including the steps of:

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- a) delaying said talent signal by a varying delay amount in responsive to said varying relative timing;
 - b) adjusting the level of said talent signal in delayed or undelayed form and providing a cancellation signal in response to the delayed form thereof;
 - c) in said delaying step a) or said adjusting step b) or both, changing the amount of at least one of said varying delay amount or said level in responsive to said mix minus signal or said feedback signal or both;
 - d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal and said talent signal in undelayed form.

Claim 51 A method for providing a mix minus signal from a feedback signal and a talent signal said signals having a relative delay which may vary, including the steps of:

- a) delaying said talent signal by an varying delay amount responsive to said relative delay which may vary;
- b) adjusting the level of said talent signal in delayed or undelayed form in a variable gain circuit and providing a cancellation signal in response to the delayed version thereof;
- c) wherein in step a) said varying delay amount and in step b) said level are automatically

responsive to at least one of said mix minus signal and said feedback signal and;

d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

wherein at least one of said varying delay amount of step a) and said level of step b) is responsive to said mix minus signal and said talent signal in undelayed form.

Claim 52 A method of providing a mix minus signal from a feedback signal and a talent signal which have a variable relative timing, including the steps of:

a) delaying said talent signal by a varying delay amount in responsive to said varying relative timing;

b) adjusting the level of said talent signal in delayed or undelayed form and providing a cancellation signal in response to the delayed form thereof;

c) in said delaying step a) or said adjusting step b) or both, changing the amount of at least one of said varying delay amount or said level in responsive to said mix minus signal or said feedback signal or both;

d) providing said mix minus signal in response to said feedback signal and said cancellation signal;

wherein said varying delay amount of step a) is automatically adjusted in response to comparison of said feedback signal and said talent signal in undelayed form, and said level of step b) is automatically adjusted in response to said mix minus signal and said talent signal in delayed form.

Claim 53 A method for providing a mix minus signal from a feedback signal and a talent signal said signals having a relative delay which may vary, including the steps of: